

DEPARTMENT OF TRANSPORTATION**DIVISION OF ENGINEERING SERVICES**

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch
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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:**Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-002460**Date Inspected:** 15-Apr-2008**Project Name:** SAS Superstructure**OSM Arrival Time:** 1400**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 2330**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Ye Yong Jun**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** OBG/Tower**Summary of Items Observed:**

CALTRANS Quality Assurance (QA) Inspector, Erik Prue was present for the fabrication scheduled for this project at the ZPMC facility in Shanghai, China for the San Francisco Oakland Bay Self Anchored Suspension Bridge.

Bay 4: QA Inspector randomly observed ZPMC qualified welder Gu Caihong ID#053748 welding cover passes on a Complete Joint Penetration (CJP) butt splice joint designation B-U3c-S on 75mm thick diaphragm plate SSD1-SA322 side A. Welder was observed welding in the 1G (flat) position utilizing Submerged Arc Welding (SAW) process with a 4.8mm diameter electrode, filler metal LA85. QA Inspector observed the ZPMC QC Inspector Ye Yong Jun verifying welding parameters and pre-heat were in accordance with the Welding Procedure Specification (WPS). QA Inspector with QC Inspector observed parameters as follows: preheat temperature to be at 195°C and measured the welding parameters to be 633 amps, 31.5 volts, a travel speed of 504 mm/min. Welding parameters verified by QA Inspector appear to be in general compliance with the approved WPS-B-T-3221-B-U3c-S-1.

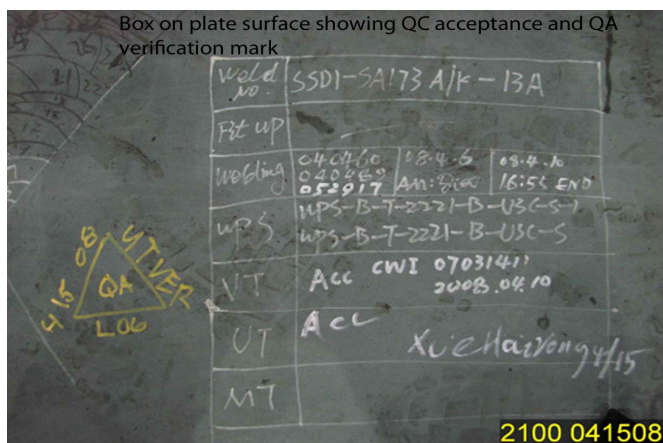
Tower Bay1: QA Inspector performed ultrasonic verification testing of the tower diaphragm plate Complete Joint Penetration (CJP) butt joint after ZPMC QC UT acceptance. Plate QA UT tested are SSD1 SA173 A/K 13A side "A". QA Ultrasonic Testing (UT) was performed to verify that a minimum of 10% of the weld meets the requirements of the contract documents and AWS D1.5-2002. The weld and base metal were scanned utilizing a Krautkramer Branson USN 60 #01RN5T. QA Inspector performed a base metal lamination check using a 25mm diameter 2.25 MHz transducer and a shear wave scan using a 20mm x 15mm 2.25 MHz transducer on a 70 and 45 degree angle wedges from face A. For details please see the ultrasonic testing report TL-6027 dated April 15,

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2008. QA Inspector found the welds inspected to be in compliance with AWS D1.5- 2002 Table 6.3 and the contract documents.

Bay 7- QA Inspector performed ultrasonic (UT) verification testing of Floor Beam Sub Assembly Complete Joint Penetration (CJP) welds at joints FB 022-002-125 thru 127 and FB 021-002-126 and 127 after ZPMC QC acceptable UT inspection. The Ultrasonic Testing (UT) was performed to verify that 10% of the weld meets the requirements of the contract documents and AWS D1.5-2002. The weld and base metal were scanned utilizing a Krautkramer Branson USN 60 #01RN5T. QA Inspector performed a base metal lamination check using a 25mm diameter 2.25 MHz transducer and a shear wave scan using a 20mm x 15mm 2.25 MHz transducer on a 70 degree angle wedge from face A. For details please see the ultrasonic testing report TL-6027 dated April 15, 2008. QA Inspector found the welds inspected to be in compliance with AWS D1.5- 2002 Table 6.3 and the contract documents.



Summary of Conversations:

No significant conversations this day.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Patrick Lowry, 858 344-2712, who represents the Office of Structural Materials for your project.

Inspected By: Prue,Erik

Quality Assurance Inspector

Reviewed By: Hager,Craig

QA Reviewer